Second, as discussed below, MCI's and AT&T's request for integrated DSLAM functionality at the RT and DSL transport over fiber feeder (*i.e.*, "DSL over fiber") is unnecessary. Verizon VA's proposed interconnection agreements provide the means for AT&T and WorldCom to access the HFPL where fiber has been deployed in a manner that comports with Verizon VA's current legal obligations.

Q. DO THE COMMISSION'S REGULATIONS REGARDING THE STATUS OF PACKET SWITCHING AS A UNE PROVIDE A BASIS FOR INCLUDING AT&T'S OR MCI'S LANGUAGE FOR INTEGRATED DSLAM FUNCTIONALITY AT THE RT AND DSL TRANSPORT OVER FIBER FEEDER (I.E., "DSL OVER FIBER") IN THE AGREEMENT?

A. No. The *UNE Remand Order* identifies four conditions that all must be satisfied in order for packet switching (*e.g.*, an integrated DSLAM functionality at the RT) to be considered a UNE. In rough paraphrase, those conditions are: (1) the ILEC has deployed DLC; (2) there is no spare copper available; (3) the ILEC does not permit DSLAMs to be deployed at sub-loop interconnection points; ***and*** (4) the ILEC has deployed packet switching capability for the ILEC's own use. Verizon VA's interconnection agreements permit customers to deploy DSLAMs at sub-loop interconnection points, ***and*** Verizon VA has not deployed packet switching capability for its own use. Thus, the last two of the conditions are not satisfied, and packet switching may not be considered to be a UNE.

Q. HOW DOES VERIZON VA'S PROPOSED CONTRACT LANGUAGE PROVIDE ACCESS TO THE HFPL WHERE FIBER HAS BEEN DEPLOYED?

A. Verizon VA has identified two currently available alternatives: (1) line and station transfers; and (2) sub-loop interconnection. Consequently, Verizon VA's proposed agreements permit AT&T and WorldCom to access the HFPL of a loop served by DLC equipment by deploying a Telephone Outside Plant Interconnection Cabinet (TOPIC) at or near the FDI "accessible terminal" that connects Verizon VA's copper distribution to Verizon VA's DLC supported feeder, and then by purchasing a sub-loop feeder element to transport the data signal back to the central office. AT&T and WorldCom may also use their own facilities or those of a third party to transport the data over a network separate from Verizon VA's. Finally, they may place their own DSLAM or other equipment at or near the RT to connect the fiber feeder or copper distribution plant.[18] Thus, Verizon VA's proposed language satisfies its requirements under Commission rules.[19]

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[18] Subject to the availability of space, Verizon VA allows the collocation of AT&T or WorldCom's DSLAM inside Verizon VA's RTs. *See* Verizon-proposed interconnection agreement to AT&T §§ 11.2.14.6.14 and 13.6 and Verizon-proposed interconnection agreement to WorldCom § 5.13 of the UNE Attachment. *See* Verizon-proposed interconnection agreement to AT&T § 11.2.14.7 and Verizon-proposed agreement to WorldCom § 5 of the UNE Attachment for access to feeder sub-loops.

[19] *See Line Sharing Reconsideration Order* at ¶ 12 (clarifying that "where a competitive LEC has collocated a DSLAM at the remote terminal, an incumbent LEC must enable the competitive LEC to transit traffic from the remote terminal to the central office. The incumbent LEC can do this, at a minimum, by leasing access to the dark fiber element or by leasing access to the sub-loop element.

A. LINE AND STATION TRANSFERS

Q. PLEASE DESCRIBE VERIZON VA'S POSITION ON LINE AND STATION TRANSFERS IN ORDER TO FREE UP COPPER FACILITIES?

A. Verizon VA performs line and station transfers in its provisioning process when copper facilities must be found to accommodate a copper based advanced service. Line and station transfers involve the move of a customer's service from one existing loop facility onto another existing loop facility serving the same location. This is done where suitable facilities exist, at the discretion of Verizon VA. Verizon VA will perform a line and station transfer of a loop from fiber to qualified copper on the CLEC's behalf, provided that such transfers do not impair the service of any third parties. Costs associated with line and station transfers are recovered via a non-recurring charge (a set fee) and will be billed to the cost-causer.

B. SUB-LOOP ACCESS TO THE HFPL ON LOOPS SERVED BY FIBER

Q. HOW DOES VERIZON VA'S PROPOSED INTERCONNECTION AGREEMENT PROVIDE AT&T AND WORLDCOM WITH THE ABILITY TO PROVIDE ADVANCED SERVICES TO AN END USER SERVED BY FIBER-FED DLC USING SUB-LOOP ARRANGEMENTS?

A. As depicted in Exhibit ASP-10, AT&T and WorldCom can gain access to the high frequency portion of Verizon VA's copper distribution facilities by establishing an interconnect arrangement at the Verizon VA FDI cabinet. This scenario is outlined in Verizon's proposed interconnection agreement to AT&T at

§ 11.2.14.6.3 and Verizon's proposed interconnection agreement to WorldCom at § 5.3 of the UNE Attachment.

Q. HOW DOES A CLEC REQUEST THE ESTABLISHMENT OF AN INTERCONNECT ARRANGEMENT AT THE VERIZON VA FDI?

A. The requesting CLEC is required to submit a Sub-loop Interconnect Application to its Verizon Account Manager. The Verizon Account Manager will forward the request to the appropriate departments to be assessed for the availability of space if remote terminal collocation is desired for available terminal blocks, technical feasibility, estimated installation time frame, and to provide costs for the necessary work performed by Verizon VA to establish the interconnect arrangement.

Q. WILL THE WORK PERFORMED BY VERIZON VA TO ESTABLISH A SUB-LOOP INTERCONNECT ARRANGEMENT AT THE VERIZON VA FDI ALWAYS BE THE SAME?

A. No. Each provisioning scenario will be unique and fact specific.

Q. WHAT ARE THE RESPONSIBILITIES OF THE REQUESTING CLEC IN ESTABLISHING THE SUB-LOOP INTERCONNECT ARRANGEMENT?

A. The requesting CLEC will be responsible for securing any necessary right-of-ways and/or zoning from the local municipality. The CLEC will also be responsible for providing any power, trenching, conduit, a terminal block to be used as a point of demarcation, and any supporting structure necessary to complete its portion of the sub-loop interconnect arrangement.

Q. WHAT ARE VERIZON VA'S RESPONSIBILITIES IN ESTABLISHING THE SUB-LOOP INTERCONNECT ARRANGEMENT?

A. Verizon VA will modify the Verizon FDI for the appropriate amount of cross-connect facilities, if necessary, to accommodate the sub-loop interconnect arrangement. Verizon VA will also place the interconnect cable between the Verizon VA FDI and the terminal block (point of demarcation) supplied by the requesting CLEC. Verizon VA will be responsible for maintenance of the interconnect cable on a going forward basis.

Q. DOES VERIZON VA PROVIDE SPLITTER FUNCTIONALITY WITH THIS LINE SHARING UNBUNDLED SUB-LOOP ARRANGEMENT?

A. No. It will be up to the CLEC to provide its own splitter arrangement.

Q. WHAT OPTIONS ARE AVAILABLE TO THE CLEC FOR PLACEMENT OF ITS DSLAM EQUIPMENT?

A. The CLEC may place its DSLAM adjacent to the Verizon VA's FDI on the CLEC's side of the demarcation point of the sub-loop interconnection arrangement. The CLEC may also choose to collocate its DSLAM within a Verizon VA RT, if space is currently available and it is technically feasible. Finally, the CLEC may choose to place its equipment on an adjacent or near by property.

Q. HOW DOES A CLEC REQUEST THE USE OF THE HIGH FREQUENCY PORTION OF THE SUB-LOOP DISTRIBUTION FACILITY AFTER THE INTERCONNECT ARRANGEMENT HAS BEEN ESTABLISHED?

A. The CLEC will submit a local service request (LSR) to request the utilization of the high frequency portion of Verizon VA's sub-loop distribution facilities. In order to meet the definition of line sharing, there must be an existing Verizon VA Retail POTS customer on the loop facility in order for the LSR to be deemed valid.

Q. WHAT WORK HAS TO BE PERFORMED BY VERIZON VA IN ORDER TO REARRANGE THE FACILITIES TO ACCOMMODATE THE LINE SHARING UNBUNDLED SUB-LOOP ARRANGEMENT?

A. Verizon VA will need to dispatch a technician to run jumpers to re-route both the voice and data usage originating from the end-user customer over to the CLEC's portion of the sub-loop interconnect arrangement. The Verizon VA technician will also need to run a second set of jumpers to route the POTS usage from the CLEC to the switch in Verizon VA's central office (*see* Exhibit ASP-10).

Q. WHAT WORK MUST THE CLEC PERFORM TO ACCOMMODATE THE LINE SHARING UNBUNDLED SUB-LOOP ARRANGEMENT?

A. The CLEC will need to run a set of jumpers routing the data usage to its DSLAM equipment. The CLEC will also need to run a second set of jumpers to route the POTS usage back to the Verizon VA FDI (see Exhibit ASP-10).

Q. WHAT OPTIONS ARE AVAILABLE TO THE CLEC FOR TRANSPORT OF THE DATA USAGE?

A. The CLEC has the option of providing its own transport facilities, using transport from a third party provider, or leasing an unbundled feeder facility or dark fiber, if

available, from Verizon VA (assuming the CLEC has a collocation arrangement in the Verizon VA central office).

IX. CLEC FURNISHED LINE CARD OPTION (A/K/A "LINE CARD" OR "PLUG AND PLAY" COLLOCATION)

(Issues III-10, IV-28, and V-6)

Q. WHAT IS A LINE CARD?

A. A line card (also known as a channel card) is a circuit pack that can be inserted in the channel bank. As used by AT&T and WorldCom, the line card would be inserted at the field end of the NGDLC system. Facing the customer, the card typically terminates two, four, or six end user copper pairs and performs service specific functions. Facing the network, the card works in conjunction with the system software and common cards in the DLC channel bank and provides an interface to the higher speed multiplexing and transport cards in the DLC channel bank.

Q. SHOULD AT&T OR WORLDCOM BE ENTITLED TO FURNISH A LINE CARD AT THE NGDLC RT UNDER EITHER AN ALLEGED PHYSICAL OR VIRTUAL "COLLOCATION" ARRANGEMENT (SEE WORLDCOM LANGUAGE AT 4.9.4.4.2)?

A. No. The option for a CLEC provided line card (a) cannot be required by the Act; (b) would be economically wasteful, inefficient, and not in the public interest; and (c) would not produce any of the alleged benefits claimed for what CLECs call "line card collocation."

A. "LINE CARD COLLOCATION" AND ASSOCIATED SUB-LOOP ELEMENTS CANNOT BE REQUIRED UNDER THE ACT.

Q. WHAT ARE THE BASES FOR VERIZON VA'S BELIEF THAT "LINE CARD COLLOCATION" CANNOT BE REQUIRED UNDER THE ACT AND EXISTING COMMISSION REGULATIONS?

A. The Act gives the Commission authority to order collocation only of "equipment" that is necessary for interconnection or access to UNEs. It does not require an ILEC to include CLEC-supplied components in the ILEC's own equipment. Line cards have no stand-alone function — they are useless without the associated hardware and software into which they are integrated. Therefore, line cards cannot be considered "equipment."

Q. HAVE THE UNES THAT WOULD BE ACCESSED BY A CLEC-PROVIDED LINE CARD BEEN DEFINED?

A. No. To date, nothing that terminates at a line card slot has been identified by the Commission as a UNE. Specifically, nothing that terminates at a line card slot can qualify as a Subloop UNE, because the DLC backplane is not an accessible terminal for obtaining access to the Subloop UNE.

The Commission's rules require unbundled access to those sub-loop elements that terminate at "accessible terminals." The Commission has defined an accessible terminal as a location where a technician can gain access to the wires without opening a splice case. In compliance with this requirement, Feeder, Distribution

(FDI), and House and Riser sub-loop elements have been defined that terminate at the known accessible terminals of the Main Frame, FDI, or House Block.

For the reasons outlined in § VI above, the line card slot fails to meet the definition of an "accessible terminal." Moreover, a technician cannot access the wires in a line card slot under the normal definition of access. On the feeder side of the slot, there are no wires to be accessed. Instead, the connection from a line card slot and the high speed side of the equipment are internally wired. Consequently, no sub-loop elements that would terminate on the line card slot have been required. Indeed, the fact that the Commission has a separate NPRM addressing whether what AT&T and WorldCom label "line card collocation" can be required suggests that it did not consider a line card slot to meet the definition of an "accessible terminal"; otherwise, the Commission could have stated as much in the *Line Sharing Reconsideration Order*. Also, ¶ 395 of the *Remand Order* states: "Accessible terminals contain cables and their respective wire pairs that terminate on screw posts." A line card slot does not contain "screw posts." Nor can any of these elements pass the test for requiring unbundled access. The Act requires a CLEC to demonstrate that failure to, "provide access to such network elements would impair the ability of the telecommunications carrier seeking access to provide the services it seeks to offer." This showing has not and cannot be made for several reasons. First, for many of the market segments to be served, there are alternative providers of advanced services, including CATV companies. Accordingly, a sweeping determination that a CLEC-provided line

card solution must be available everywhere is not supported by the facts. Second, Verizon VA currently provides sub-loop access and RT collocation that can be used by the CLECs to achieve the access to the HFPL. There has not been—and cannot be—a finding that sub-loop access is not a viable alternative for the CLECs. Third, the required "services it seeks to offer" have not been identified. Moreover, even if these services were identified, before they could be classified as UNEs, the Commission would first have to determine that the absence of CLEC-provided line cards and the associated sub-loop elements somehow impairs the ability of the CLECs to provide these services.

B. CLEC-PROVIDED LINE CARDS ARE ECONOMICALLY INEFFICIENT AND WASTEFUL.

Q. EVEN IF VERIZON WERE REQUIRED TO PERMIT CLEC-PROVIDED LINE CARDS, WOULD THAT CAUSE PRACTICAL PROBLEMS?

A. Yes. First, CLEC-provided line cards would only work if they were an option of a service such as SBC's Project Pronto.[20] Without the deployment of this (or a similar) service, the enabling hardware, network transport, OSS, Methods and Procedures, etc. that would host the CLEC provided line card would not be available from the ILEC. Furnishing of the line card without the deployment of

[20] SBC's Project Pronto service capability to RTs entails the creation of a DSL capable transmission channel between the end user premises and the end user's serving wire center using suitably equipped NGDLC RTs. The suitably equipped NGDLC RT uses line cards that together with the rest of the RT and the supporting ILEC infrastructure are capable of supporting both voice and DSL based data services. Verizon does not have a similar service because it (1) does not have the technology necessary for such a service deployed in its network, (2) lacks regulatory authority to provide advanced services or to own the equipment necessary to do so, and (3) has not determined that the voluntary offering of such a service can reasonably be expected to pay for itself and make a profit.

this infrastructure would not achieve the desired service capability. Verizon VA, however, does not offer a service such as Project Pronto, and the deployment of the supporting infrastructure cannot be mandated under the terms of the Act.[21] Accordingly, it is Verizon VA's view that the most likely driver for the deployment of this platform would be a voluntary service offering similar to Project Pronto. Of course, the CLECs always have the alternative of deploying this architecture on their own through interconnection of their own DSLAM at the FDI or other sub-loop accessible terminal.

Q. WHAT OTHER COSTS WOULD BE INTRODUCED THROUGH A CLEC FURNISHED LINE CARD OPTION?

A. Significant OSS modifications would be required to identify and administer ownership of equipment at the line card level. With CLEC-provided line cards, the channel bank would be owned by Verizon VA, line cards one and two might be physically owned by CLEC A, line cards three and four might be virtually owned by CLEC B, line cards five though eight might be owned by Verizon VA, etc. Verizon VA's current systems are incapable of tracking, inventorying, and administering ownership of equipment at the circuit pack level.

Q. IF A CLEC WERE ALLOWED TO PROVIDE LINE CARDS, WHICH LINE CARDS COULD A CLEC INSTALL IN THE RT?

A. If this option were allowed (which it should not be), Verizon VA would publish a list of tested and accepted line cards that the CLECs would be allowed to furnish.

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[21] *See Iowa Utilities Board v. FCC*, 120 F.3d 753, 812-13 (8th Cir. 1997) (holding that § 251 of the Act only requires ILECs to provide access to its "*existing* network—not to a yet unbuilt superior

This step is necessary for the following reasons. First, Verizon VA's contracts with its vendors provide that Verizon VA's equipment warrantees will be voided if foreign or unlicensed equipment is installed. Accordingly, a starting point is that only plug-ins manufactured by Verizon VA's vendors or licensees would be eligible for installation for the CLEC. Second, to assure the integrity of its network, Verizon VA would have to test the line card (as it tests all line cards) before it could be deployed in the working network, particularly since these cards would be inserted in the middle of POTS service, not just data. Third, Verizon VA would require contracts and tariff provisions to compensate Verizon VA for the network resources that would be consumed by the CLECs line cards (*see* discussion below regarding UBR and CBR QoSs). And finally, Verizon VA's OSS would have to be updated to recognize, administer, and maintain the CLEC-provided line card. Once these steps were complete, the line card could be added to the list of approved line cards that could be furnished by the CLEC.

Q. ASSUMING THE CLEC HAD AN APPROVED LINE CARD THAT IT WISHED TO INSTALL IN THIS SCENARIO, WHAT WOULD HAPPEN NEXT?

A. xDSL capable line cards serve two, four, or six subscribers lines. To set aside this capacity for the use of the CLEC, an important initial requirement of the CLEC furnished line card option would be that the CLEC would have to submit an order to have Verizon VA set aside the use of the line card "slot" for the CLEC's future provision of the line card and service.

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one.") (emphasis in original).

Q. WHY IS THE RESERVATION OF THE "SLOT" AN IMPORTANT STEP?

A. This step assures that the lines to be served by the CLEC-provided line card are set aside for that CLEC's use. Without this step, the CLEC might reach the stage where it is ready to deploy its line cards only to discover there are no slots available that are not already serving at least one working line. This step also assures that other CLEC or Verizon VA services are not inadvertently assigned into the CLEC-provided line card.

Q. ONCE THE CLEC RESERVED THE LINE CARD "SLOT", WHAT WOULD IT BE REQUIRED TO DO NEXT?

A. Most likely, the CLEC would have two alternatives for installing the CLEC-furnished line card in the reserved line card slot. Under a virtual collocation-like option, Verizon VA personnel would install the plug-in pursuant to a CLEC service request. Under a physical collocation-like option, CLEC personnel would install the plug-in under escort by Verizon VA.

Q. ONCE THE LINE CARD IS INSTALLED, WHAT STEPS WOULD OCCUR NEXT?

A. At this point, the CLEC would submit a service order just like the order that would be have been submitted for the service where Verizon VA furnishes the line card. The only difference is that this service order would provide for the use of the CLEC "slot" and CLEC-provided line card.

Q. IF VERIZON VA PROVIDED A SERVICE SIMILAR TO PROJECT PRONTO, COULD IT SUPPORT "LINE SHARING" WITH THE CLEC-PROVIDED LINE CARD OPTION?

A. No. Verizon VA could not support a line sharing option with the CLEC-provided line card. With line sharing, Verizon VA would continue to provide the voice service, but the voice path would have to go through a CLEC-provided resource (*i.e.*, the line card). There is no basis in the Act to require Verizon VA to use CLEC facilities in the provision of a Verizon VA service. Moreover, Verizon VA could not guarantee attainment of its service quality objectives in such an environment.

Q. HOW DOES THE CLEC-PROVIDED LINE CARD INTRODUCE INVENTORY MANAGEMENT INEFFICIENCIES?

A. As stated above, line card slots provide capacity in increments of two, four or six lines. In residential areas, demand normally appears a line at a time. To set aside of slot capacity to the CLECs in increments of two or four in order to satisfy end user demand that appears a line at a time introduces additional "breakage," which is one of the frequently discussed cost components in Verizon VA's cost filings. Another inefficiency created by the CLEC-provided line card option is a need for multiple parties to maintain separate inventories of provisioning and maintenance spare line cards.

Q. COULD THESE ADDITIONAL COSTS AND INEFFICIENCIES SOMEHOW BE OFFSET BY NEW FEATURE FUNCTIONALITY THAT MIGHT BE DRIVEN BY THE CLEC-PROVIDED LINE CARD OPTION?

A. No. First, the shelf, software and back plane (*i.e.*, data bus) specifications of the NGDLC systems are proprietary to Verizon VA's vendors. Furthermore, Verizon VA's vendor agreements and warranties prohibit the use of foreign equipment in its vendor-provided channel banks. As a result, only line cards manufactured or licensed by Verizon VA's vendors would be eligible for installation under a CLEC-provided line card option. These same line cards would be and are available for purchase directly by Verizon VA. Vendors do significant market research of their own before they invest in developing new feature functionality. If they find a feature functionality that has market appeal, they would normally seek to make it available to the largest possible universe to maximize their own sales. Therefore, whether Verizon VA owns the cards or a CLEC owns the cards, the same features would be made available to the marketplace by the vendors. Once again, the CLEC-provided line card option does not enhance service capabilities, but does increase administrative complexity.

Q. IF THE CLEC WERE SOMEHOW ABLE TO SECURE AND INSTALL A COMPATIBLE LINE CARD WITH NEW SERVICE FUNCTIONALITY THAT FOR SOME REASON WAS NOT AVAILABLE DIRECTLY TO VERIZON VA, WOULD IT BE LIKELY THAT THE NEW SERVICE CAPABILITIES OF THIS LINE CARD WOULD FUNCTION PROPERLY?

A. No. As explained above, the line card is just one component of the NGDLC channel bank and RT assembly, which in turn are components of an even larger network. All of the pieces must work together in order to support any new line

card feature. It is very likely that the hypothetical new service capability would require support from new software (*i.e.*, a new software release) or new common cards at the RT. In addition, new line cards would almost certainly require OSS enhancements to enable its use with Verizon VA's systems.

Q. IF CLECS WERE ABLE TO DEVELOP A NEW LINE CARD OR LINE CARD FEATURE WITH VERIZON VA'S NGDLC PLATFORM VENDOR OR APPROVED LICENSEE, WOULD THIS CARD BE COMPATIBLE WITH VERIZON VA'S OPERATIONS SUPPORT SYSTEMS?

A. No. Even if CLECs were to independently develop new cards or features with Verizon VA's vendors, Verizon VA would still need to perform regression testing with its currently approved software release(s) and integration testing with all impacted OSSs. Regression testing, which evaluates compatibility with existing hardware and software, assures that new hardware, software and product features do not harm existing system functionality. OSS integration testing is required to identify and verify any new OSS enhancements required to assimilate new product features and capabilities into existing OSS platforms. This is the standard practice in Verizon for all new hardware and software introductions. Therefore, since this work must be performed regardless, there is essentially nothing to be gained from independent development of cards and features outside of the standard product development and testing practices within Verizon VA.

Q. IF THE CLEC WERE SOMEHOW ABLE TO SECURE A COMPATIBLE LINE CARD WITH NEW SERVICE FUNCTIONALITY THAT FOR SOME REASON WAS NOT AVAILABLE DIRECTLY TO VERIZON BUT

WAS COMPATIBLE WITH VERIZON VA'S EXISTING HARDWARE, NETWORK AND OSS, WOULD IT BE APPROPRIATE FOR THE CLEC TO UNILATERALLY DEPLOY SUCH A LINE CARD?

A. No. Even if a CLEC line card that was unavailable to Verizon VA were compatible with Verizon VA's existing hardware, network and OSS, different line card features consume different levels of shared Verizon VA's network resources (in this case, bandwidth). An example of these differences is provided below in the comments on WorldCom's proposal for Quality of Service based Permanent Virtual Channels and Paths. Verizon VA is entitled to analyze the network resource requirements of any new potential line card feature and put in place appropriate rates for cost recovery.

Q. THE SOLE ALLEGED BENEFIT OF THE CLEC-PROVIDED LINE CARD APPEARS TO BE THAT IT WILL SOMEHOW DRIVE VENDORS TO MANUFACTURE (AND VERIZON VA TO DEPLOY) NEW FEATURE CAPABILITIES. WILL THE AVAILABILITY OF THE CLEC-PROVIDED LINE CARD HAVE THIS EFFECT?

A. No. The line card is a single, albeit important, component of a much larger network. Any new service capability requires close coordination between the vendor, Verizon VA network planning and operations and the customer. The CLEC provided line card, for the reasons discussed above, will not result in that necessary coordination.

Q. CAN YOU IDENTIFY AN ALTERNATE AND SUPERIOR MEANS OF INCORPORATING THE CLEC FEATURE REQUIREMENTS INTO A POTENTIAL PROJECT PRONTO-LIKE WHOLESALE OFFERING?

A. Yes, as with any service offering, Verizon is pleased to collect information from its customers regarding new feature requirements that could cost effectively be added to Verizon's services. Verizon CLEC customers could approach Verizon and vendors jointly with suggested product enhancements and Verizon could work with those customers and Verizon's vendors to determine if the new feature capability could cost effectively be introduced. Verizon notes that as part of SBC's Project Pronto offering, SBC introduced a new process called the "Special Request Process." Under this arrangement, a CLEC may request a meeting (coordinated by the SBC Account Management team) with the appropriate SBC resources to discuss a unique CLEC serving arrangement. This process is intended for individual customers who are requesting an evaluation, price quote, and development timeframe for a new service feature or capability. This is similar to the "bona fide request" (BFR) process Verizon uses to assess requests for new UNE functionalities.

X. COMMENTS REGARDING AT&T AND WORLDCOM'S PROPOSED CONTRACT LANGUAGE

(Issues III-10, IV-28, and V-6)

A. WORLDCOM'S PROPOSED CONTRACT LANGUAGE

(Issues III-10 and IV-28)

Q. DO YOU AGREE WITH WORLDCOM'S PROPOSED LANGUAGE FOR "LINE SHARING OVER FIBER FED LOOPS?"

A. No. As stated previously, Verizon VA's proposed agreements provide two alternatives for providing access to the HFPL for fiber fed loops: line and station transfers and DSLAM interconnection at the sub-loop. Verizon VA's network is currently incapable of supporting Integrated DSLAM functionality at the RT and DSL transport over fiber feeder (*i.e.*, "DSL over fiber" or "Line Sharing over Fiber Fed Loops"). Accordingly, this requested feature capability (presumably something comparable to the SBC Project Pronto Service) is not ripe for inclusion in the present contracts. As stated above, because many of the issues associated with this request are being addressed in Commission proceedings where all interested parties may participate in greater detail, a state arbitration amongst a very limited number of the interested parties represents an inferior venue for addressing these questions.

Q. WHAT OTHER CONCERNS DOES VERIZON VA HAVE REGARDING THE PROPOSED WORLDCOM LANGUAGE?

A. WorldCom's proposed language not only assumes: (1) the availability of Pronto-like service network and capability; and (2) the designation of this capability as a UNE; but (3) goes further to disaggregate the posited UNE into sub-network components labeled "interconnection components." As stated previously, the Commission's regulations identify four conditions that all must be satisfied for establishing packet switching as a UNE and two of these conditions have not been met. While its language is not clear, it appears that WorldCom is claiming UNE status for the "interconnection components" that might comprise the disputed packet switching UNE. Just as the necessary and impair showing has not been

made for the packet switching UNE, a necessary and impair analysis is required and missing for each of the proposed "interconnection components."

Q. DO THE PROPOSED "INTERCONNECTION COMPONENTS" DISCUSSED IN WORLDCOM'S PROPOSED § 4.9.4.2 COMPLY WITH EXISTING REGULATIONS REGARDING SUB-LOOP ELEMENTS?

A. No. Commission regulations provide that sub-loop elements must begin and terminate at an "accessible terminal" where an "accessible terminal is a point on the loop where technicians can access the wire or fiber within the cable without removing a splice case to reach the wire or fiber within."[22] Under this definition of accessible terminal, pole mounted terminals, pedestals, the Feeder Distribution Interface (FDI) and the Main Frame are all identified as "accessible terminals." In contrast, most of the proposed WorldCom "interconnection components" must begin or end at the line card slot in a channel bank at the remote terminal (*see* for example HBPSL, LFPSL, LCRT, CC1, CC2,CC3 FPVC, FPVP, FTDM in §§ 4.9.4.2,1 though 4.9.4.2.10). However, a line card slot is not an accessible terminal.

Q. WHY DOES WORLDCOM'S PROPOSED LANGUAGE PROVIDE FOR THE "INTERCONNECTION COMPONENTS" THAT BEGIN OR END AT THE LINE CARD SLOT?

A. These components are to enable WorldCom's unlitigated concept of "line card collocation." One of the requirements of the Act is that collocation is exclusively for the purpose of achieving access to Unbundled Network Elements. It appears

that that MCI intends these "interconnection components" to represent UNEs that would be accessed by a "collocated" line card. As noted above, there is no basis for this position.

Q. ARE THERE TECHNICAL FEASIBILITY ISSUES ASSOCIATED WITH WORLDCOM'S LIST OF "INTERCONNECTION COMPONENTS?"

A. Yes, the flagship component appears to be the "DSLAM line card/electronics in the Remote Terminal (LCRT)" (*see* § 4.9.4.2.3) which § 4.9.4.2.16 claims must be individually orderable. Verizon VA notes that (as discussed previously) the line card slot is not supported by "accessible terminals" and accordingly any LCRT that was installed would be hard wired to the other feeder and distribution "interconnection components" on WorldCom's list. Accordingly the LCRT cannot be individually ordered. Verizon VA has doubts that a necessary and impair analysis is possible for a would-be UNE that can not be separately ordered.

Q. DOES WORLDCOM'S LIST OF "INTERCONNECTION COMPONENTS" RAISE ANY COST RECOVERY ISSUES THAT SHOULD BE NOTED AT THIS STAGE OF THE PROCEEDING?

A. Yes, while failing to identify required UNEs, WorldCom's list of "interconnection components" represents a reasonable starting point for identification of the network resources that would be consumed by a service such as Project Pronto. Verizon VA is concerned however that different Quality of Service (QoSs)[23] bands are lumped together under the single headings of Permanent Virtual

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[22] *UNE Remand Order* at ¶ 206.

Connection (PVC) and Permanent Virtual Path (PVP) at §§ 4.9.4.2.15.2 and 3. Verizon VA believes each QoS should be supported by a separate "necessary and impair" analysis because of the unique service and cost recovery issues introduced by each QoS.

Q. CAN YOU PROVIDE AN EXAMPLE OF THE FEATURE FUNCTIONALITY AND COST RECOVERY ISSUES INTRODUCED BY QoSs?

A. Verizon is investigating an Unspecified Bit Rate (UBR) QoS for a potential Project-Pronto-like offering. UBR represents a "best effort" packet service meaning that the end user will be provided the fastest possible service subject to the network resources available at the time the traffic is offered to the network. In the case of UBR, bandwidth is not reserved for each end user. For example, an end user that subscribes to a hypothetical 1.0 MBPS maximum UBR service will likely achieve 1.0 MBPS service during off-peak periods. However, during peak periods, because of network resource limitations, the end user may achieve something less than 1.0 MBPS of bandwidth. In contrast, under a Constant Bit Rate (CBR) QoS, bandwidth is reserved for each end user subscribing to CBR service. This is due to the fact that CBR QoS is granted priority over other ATM classes of service. For example, a CLEC that purchased a potential 5MBPS CBR channel to support a video service to an end user location should receive that bandwidth 24 hours/day, 365 days/year.

[23] As used in this testimony, Quality of Service describes the performance characteristics of a circuit,

The implications of the differences between these QoSs for cost recovery purposes can be illustrated by assuming the existence of an 100MB connection between the RT and the central office that costs Verizon $100/month in carrying charges. Under the 1 MB UBR service described above, it might be possible to sell that service to 200 subscribers recognizing that, statistically, at most 150 subscribers might be active during the peak. Therefore, during the peak period, it is possible that the end user that are attempting to use the service during may experience some level of throughput less than 1MBPS. This approach is known as "over subscription." (During off peak periods, because statistically no more than 100 subscribers would be active at any given time, all users would experience 1MBPS service.) Under this assumed scenario, Verizon VA might charge each end user $100/200=$.50 for the 1 MBPS UBR PVC data connection between the RT and the OCD port. In contrast, under the 5MBPS CBR service, bandwidth is reserved and "over subscription" is not used. Under this scenario, at most 20 CBR customers could share the 100MB connection and the rate to each subscriber for the 5MBPS CBR PVC would be $100/20=$5/month.

Q. DO THE NUMBERS IN THIS PREVIOUS EXAMPLE REPRESENT THE RESULTS OF ANY VERIZON VA COST STUDIES?

A. No. The numbers are offered merely to represent the concept, feature functionality, cost recovery, and public interest issues associated with QoSs.

B. AT&T'S PROPOSED CONTRACT LANGUAGE (Issues III-10 and V-6)

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including bit rate and priority of high speed data transmission.

Q. PLEASE COMMENT ON AT&T'S PROPOSED CONTRACT LANGUAGE FOR ACCESS TO LOOPS WHERE NGDLC HAS BEEN DEPLOYED.

A. AT&T's proposed loop language in this area is not so much a description of orderable, provisionable and billable capabilities to be furnished by Verizon VA, but instead represents an unspecific, expansive paraphrase (allegedly of the law) intended to create future rights for AT&T where none were enacted or intended. Accordingly, AT&T's proposed definition of the loop includes DSLAM and OCD capability that AT&T would be entitled to use under its proposed language. Including these capabilities in the proposed interconnection agreement is premature and must be rejected because (as discussed above): access to the high frequency portion of the loop using DSLAM capability at the RT and OCDs in the central office is being addressed in an active nation and industry wide Commission investigation; Verizon VA has not deployed the necessary network infrastructure for supporting AT&T's request; Verizon VA has not committed to deploy the necessary network infrastructure for supporting AT&T's request; Verizon VA has not committed to a service that would drive the deployment of the necessary network infrastructure for supporting AT&T's request.

Q. GIVEN THE LACK OF EXISTING NETWORK INFRASTRUCTURE AND THE OPEN COMMISSION INVESTIGATION ON THIS VERY ISSUE, WHAT IS VERIZON VA'S UNDERSTANDING REGARDING THE BASIS FOR AT&T'S CLAIM FOR THIS CAPABILITY?

A. AT&T's position is that the DLSAM, OCD and the associated data transport capability are allegedly features and functions of the loop that the Commission allegedly determined to be part of the required loop UNE under the original *UNE Remand Order*.

Q. DO EXISTING RULES REQUIRE ILECS TO PROVIDE UNBUNDLED LOOPS THAT INCLUDE DSLAMS AT THE REMOTE TERMINAL?

A. No. Section 51.319(a)(1) defines the "local loop network element" as "a transmission facility between a distribution frame (or its equivalent) in an incumbent LEC central office and the loop demarcation point at an end-user customer premises." This same section explicitly excludes DSLAM hardware from the features, functions, and capabilities included in the definition of the "local loop." This rule is sufficient to dispose of AT&T's claims.

The rules not only explicitly exclude DSLAMs from the definition of the "local loop," but they also equally clearly include DSLAMs in the definition of a different network element, "packet switching."[24] As the Commission held, "we find that the DSLAM is a component of the packet switch network element."[25]

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[24] 47 C.F.R. § 51.319(c)(4)(i). See also *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, 15 FCC Rcd 3696, 3707 (1999) ("*UNE Remand Order*") ("Packet switching is defined as the function of routing individual data message units based on address or other routing information contained in the data units, including the necessary electronics (*e.g.*, DSLAMs)").

[25] *UNE Remand Order* ¶ 175. Similarly, "We find that a component of the packet switching functionality, and included in our definition of packet switching is the Digital Subscriber Line Access Multiplexer (DSLAM)." ¶ 303.